

November 15, 1999

Mr. R. P. Powers  
Senior Vice President  
Nuclear Generation Group  
American Electric Power Company  
500 Circle Drive  
Buchanan, MI 49107-1395

SUBJECT: NRC INSPECTION REPORT 50-315/99024(DRS); 50-316/99024(DRS)

Dear Mr. Powers:

On October 1, 1999, the NRC completed an inspection at your D. C. Cook Units 1 and 2 reactor facilities. The inspection addressed Case Specific Checklist Item No. 2A, "Failure to Promptly Identify and Evaluate Conditions Adverse to Quality," that was established through the NRC's Manual Chapter 0350, "Staff Guidelines for Restart Approval." This inspection included a review of the licensee's corrective action program to verify that the process in place was capable of identifying, documenting, and evaluating conditions adverse to quality. This inspection did not address the resolution of these issues, as that portion of the corrective action program will be reviewed during a subsequent NRC inspection. During this inspection, we selectively observed activities in progress, reviewed procedures and representative records, and discussed activities and concerns with members of your staff. The enclosed report presents the results of that inspection.

Based on the results of this inspection, no violations of NRC requirements were identified. Overall, our inspection results concluded that your identification, documentation, and evaluation of issues as required by your corrective action program and processes were adequate to support the restart of the plant. As such, based on this inspection, we will close 0350 Case Specific Checklist Item 2A. This conclusion was based on the corrective actions that you put in place to address the root causes identified as a result of the programmatic breakdown of the corrective action program. The specific corrective actions implemented are addressed in the enclosed report.

Although the implementation of your process for the identification of issues adverse to quality was acceptable for restart, there were two areas where continued attention was warranted. The first concerned several plant databases that were not completely reviewed by your staff to ascertain whether you had identified all conditions adverse to quality in the corrective action program. The associated items in the databases, however, had been appropriately screened as to whether they were necessary for restart to resolve any near term concerns. The second issue concerned instances where procedural guidance for the corrective action process was insufficient or required clarification. Examples included, not providing sufficient procedural

guidance for your staff to understand the minimum required documentation necessary on condition reports to perform an adequate evaluation and the guidance for classifying condition reports into assigned action categories based on significance was unclear to ensure consistency.

We also noted that some of the processes you put in place were considered temporary. This included the Shift Operability Review Team, which was established to address the large influx of issues into the corrective action program. In addition, the Corrective Action Review Committee was established to review apparent root causes for lower safety significant condition reports to ensure the quality was acceptable. When or if these processes are eliminated, the functions performed by the temporary process need to be thoroughly evaluated to ensure the continued level of confidence for the identification and evaluation of issues within the corrective action program.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR).

Sincerely,

/s/ J. A. Grobe

John A. Grobe, Director  
Division of Reactor Safety

Docket Nos. 50-315;50-316  
License Nos. DPR-58;DPR-74

Enclosure: Inspection Report 50-315/99024(DRS);  
50-316/99024(DRS)

cc w/encl A. C. Bakken III, Site Vice President  
T. Noonan, Acting Plant Manager  
M. Rencheck, Vice President, Nuclear Engineering  
R. Whale, Michigan Public Service Commission  
Michigan Department of Environmental Quality  
Emergency Management Division  
MI Department of State Police  
D. Lochbaum, Union of Concerned Scientists

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REGION III

Docket Nos: 50-315; 50-316  
License Nos: DPR-58; DPR-74

Report No: 50-315/99013(DRS); 50-316/99013(DRS)

Licensee: Indiana Michigan Power Company

Facility: Donald C. Cook Nuclear Generating Plant

Location: 1 Cook Place  
Bridgman, MI 49106

Dates: August 30 through October 1, 1999

Team Members: A. Dunlop, Reactor Engineer, Team Leader  
N. Shah, Reactor Engineer  
K. Green-Bates, Reactor Engineer  
R. Winter, Reactor Engineer

Approved by: John M. Jacobson, Chief, Mechanical Engineering Branch  
Division of Reactor Safety

## EXECUTIVE SUMMARY

D. C. Cook, Units 1 and 2  
NRC Inspection Report 50-315/99024(DRS); 50-316/99024(DRS)

The NRC conducted an announced inspection to review the effectiveness of the licensee's controls in identifying, documenting, and evaluating problems within the corrective action program. The overall results of the inspection concluded that adequate processes and procedures were in place for the NRC to close 0350 Case Specific Checklist Item 2A, "Failure to Promptly Identify and Evaluate Conditions Adverse to Quality."

### Engineering

- In general, the procedures and process barriers were adequate to ensure that conditions adverse to quality would be effectively identified, documented, and evaluated. However, there were some instances where the procedural guidance was insufficient or required clarification to describe certain portions of the process. (Section E2.2)
- The electronic corrective action program (eCAP) was performing its intended function. (Section E2.2)
- In general, plant personnel were aware of the corrective action program requirements, were adequately identifying conditions adverse to quality, and understood the low thresholds established for identifying problems. Most personnel interviewed were knowledgeable on the eCAP process and able to demonstrate the use of the eCAP system. (Section E2.3)
- The legacy backlogs were not completely reviewed to identify conditions adverse to quality, although the items were appropriately screened as to whether they were necessary for restart. (Section E2.3)
- The root cause evaluations were consistent with the procedures and adequately considered such items as generic applicability, operating experience and prior station occurrences. Conclusions were found to be generally well-supported and, where developed, the corrective actions were appropriate. (Section E2.4)
- The operability determination process was effective and operability determinations and the supporting evaluations were acceptable. This was based on the performance of the temporary Shift Operability Review Team. Since the plant was in a shutdown condition and the requirements for equipment were significantly lessened, operability determinations consisted mainly of designating appropriate plant mode restrictions for each of the reviewed condition reports. (Section E2.4)
- The licensee had established several performance indicators that were adequate to assess the effectiveness of the corrective action program. The event code process was too new for a complete assessment, but determined that appropriate mechanisms were in place for condition report event code trending activities and that Corrective Action Department was identifying potential adverse trends. (Section E2.5)

- The Performance Assurance Department audits and surveillances were performed by qualified personnel. The results of the audits and surveillances were in-depth and identified a number of significant findings with respect to the corrective action program. (Section E7.1)

## Report Details

### III. Engineering

#### **E2 Engineering Support of Facilities and Equipment (40500)**

##### **E2.1 Background on the Corrective Action Program**

The results of a Performance Assurance (PA) audit and NRC inspections in 1997 and 1998, concluded that there was a programmatic breakdown of the licensee's Corrective Action Program (CAP). Condition Report (CR) 97-3360 documented and addressed the programmatic breakdown. The licensee identified on the CR the following root causes for the breakdown of the CAP.

1. Managerial structure/strategy does not support success:
  - Procedure deficiencies add complexity and force over-classification of event,
  - Hierarchical structure causes preventive actions to be perceived as insurmountable, and
  - Performance indicators do not sustain a meaningful reward system and continuous improvements.
2. Culture (values, practices, and behaviors) does not support success:
  - There is a misalignment between management expectation and program requirements,
  - Adverse to change, punish change advocates, and do not manage changes that are forced upon the organizations, and
  - Accept and have low accountability for poor performance.
3. Tools, processes, and knowledge do not support success:
  - Information management systems are not useful,
  - Technical expertise is not available, and
  - Work flow design, processes, and procedures prohibit efficient accomplishments.

The licensee completed implementation of some corrective action in 1998, however, it was determined the scope and level of implementation were insufficient to correct the root causes identified. Although initial corrective actions were not effective, the licensee considered the root causes identified on the CR for the breakdown were still appropriate as discussed at a recent Corrective Action Review Board (CARB) meeting.

In order to correct the concern with the CAP and to address the restart of the facility, the licensee established a Corrective Action Program Leadership Plan, which was approved on August 30, 1999, and a Corrective Action Restart Action Plan, which was approved on September 21, 1999. These documents addressed the intended actions and schedules to resolve the identified root causes for the following eight problem statements.



- Condition Report generation threshold, timeliness, and content are inconsistent.
- Condition Report screening and evaluations for operability are not timely and do not highlight important issues.
- Condition Report resolutions and root cause analyses are not timely and fail to identify and correct true root causes.
- Condition Report corrective actions do not prevent recurrence.
- Trending and reporting processes do not highlight significant issues, degrading conditions and precursors to events.
- Corrective Action Program oversight is complacent without strong management ownership or intrusive audits.
- Corrective Action Program infrastructure is weak, and corrective action program tools do not support condition report resolution.
- Self-assessment efforts fail to identify problems or generate effective remedial actions.

The intended actions discussed in these documents appeared appropriate to address the identified problem statements and resolve the root causes of the programmatic breakdown, although this inspection only reviewed the identification of issues and not the resolution. As a result of the plant shutdown, the NRC established a Manual Chapter 0350 Restart Panel to oversee the licensee's efforts. The Restart Panel developed a Case Specific Checklist to identify those areas required to be complete for restart. Item 2 was to address the Corrective Action Program breakdown, which in turn was divided into Item 2A, "Failure to Promptly Identify and Evaluate Conditions Adverse to Quality," and Item 2B, "Inadequate Corrective Actions for Previously Identified Conditions Adverse to Quality." This inspection addressed the licensee's action in response to Item 2A.

## E2.2 Programmatic Review

### a. Inspection Scope (40500)

The inspection reviewed the corrective action process to determine whether the licensee had the appropriate procedural and process barriers in place to ensure that conditions adverse to quality would be effectively identified, documented, and evaluated. The CAP was implemented by the following procedures, which were reviewed as part of the inspection:

PMI 7030, "Corrective Action Program"  
 PMP 7030.CAP.001, "Corrective Action Program Process Flow"  
 PMP 7030.INV.001, "Root Cause Investigations and Approvals"  
 PMP 7030. INV.002, "Apparent Cause Evaluation and Resolution"  
 PMP 7030.OPR.001, "Operability Determination"

### b.1 Review of Program Procedures

The recently revised process implemented by the CAP addressed the previously identified programmatic concerns and is described below:

- A CR is required to be initiated upon discovery of any potential or actual concern with plant processes or equipment.
- The threshold for initiating a CR is set low to ensure problems are appropriately addressed by the CAP.
- The CRs are screened on a daily basis by the Event Screening Committee (ESC). The ESC is comprised of members from various plant departments and is responsible for evaluating and assigning the appropriate significance category for each CR, identifying other actions (such as operability reviews, root cause investigations, etc.) considered appropriate, and assigning the CRs to the applicable department for resolution.
- On a daily basis, station management reviews the ESC recommendations and revises the assigned categories as appropriate.

The team verified that the procedures adequately described the process as stated above and that the procedures were in good agreement with each other. For example, the team verified that the requirements for performing and evaluating root cause evaluations were consistently stated in procedures PMP 7030.CAP.001 and PMP 7030.INV.001. Additionally, the team verified that station personnel understood the requirements, especially management expectations for initiating a CR, evaluating the significance of problems, and documenting findings.

Although the procedures provided a basis for an effective corrective action program, there were instances where procedural guidance was not sufficient or needed clarification. Examples included the following:

- Procedure PMI 7030 did not specify where plant conditions adverse to quality needed to be identified. Therefore, it was unclear if all conditions adverse to quality needed to be documented within the electronic Corrective Action Program (eCAP) database or whether some issues could be documented solely within other plant databases. As a result, some conditions considered adverse to quality were identified in other databases without an associated CR. Concerns in this area were discussed in section E2.3.b.1 of this report.
- Procedures PMI 7030 and PMP 7030.CAP.001 did not provide guidance for the minimum required documentation for a CR, such that an appropriate evaluation could be performed. Inconsistent CR content was identified as one of the root cause for the CAP breakdown. The team determined that neither staff training or the CAP procedures included sufficient guidance on the minimum level of information required to be documented on a CR. Since the expectation was that a CR was a stand alone document, documenting adequate information was necessary to perform an appropriate evaluation. Concerns in this area were discussed in section E2.4.b.1 of this report.
- The function or responsibility of the daily ESC managers review of CRs and the Corrective Actions Review Committee (CARC) review of apparent cause

evaluations were not included in the CAP procedures. As a result, whether these review processes were required reviews or enhancements was unclear.

- The guidance in Attachment 1 to PMP 7030.CAP.001 for classifying issues into assigned action categories (i.e., 1-4 or X) based on significance was not clear. There were several CRs, notably regarding categories 1 and 2, where neither the team or the licensee staff could determine the appropriate action category using the stated guidance. This was due, in part, to portions of the guidance being somewhat vague, precluding a specific interpretation. For example, Attachment 1 stated that one of the criteria for a category 2 finding was that the condition could affect plant safety, reliability, or public safety. Since this was a reasonable conclusion for most issues identified, the team concluded that this was not a clear assessment of the true significance of the problem.
- Item 3.7.3 of procedure PMP 7030.CAP.001 listed specific management approvals for downgrading CRs, but did not require that the reasons be documented. The team identified some examples where higher category CRs were downgraded without any documented justification. For example, station management downgraded CR 99-18278 from a category 2 to 3 without documenting the associated reasons. While the team did not identify CRs that were inappropriately downgraded, no associated documentation existed for the licensee to verify if the downgrades were appropriate.
- Procedure PMP 7030.INV.001 did not specify when and how to perform an abbreviated root cause. The team interviewed several licensee staff and determined that no expectations had been developed. As of September 30, 1999, no abbreviated root causes had been completed by the licensee, although several were in progress.
- Procedure PMP 7030.OPER.001, did not provide guidance on the minimum training or qualification card requirements for operations and engineering staff who would perform the operability determinations and evaluations. This was not a concern for restart as the task was performed by the Shift Operability Review Team (SORT), which was composed of experienced contract personnel. However, without procedural guidance, the team was unclear as to training requirements necessary to ensure qualified personnel continued to perform and evaluate operability determinations once the temporary SORT was disbanded.
- The CARB charter and Plant Operations Review Committee (PORC) procedure did not require that engineering, operations, and maintenance staff be present to establish a quorum. The team questioned whether the purpose of these committee's would be met if these major department inputs were not all present during a CARB or PORC review. After discussion and review of meeting attendance, the team determined that although not required, staff from these three departments had been present during meetings for the last 4 months.

The licensee acknowledged these observations and initiated CR 99-22681 to address clarification of procedural guidance and to revise the procedures as appropriate.

b.2 Electronic Corrective Action Program (eCAP)

Previous licensee assessments had concluded that the licensee had an ineffective process for implementing the CAP. Specifically, the licensee had noted that the previous paper-based system was so cumbersome, that many workers were not documenting concerns and that some previously identified problems were not being resolved in a timely manner. Additionally, the process did not allow for effective trending of concerns and was difficult to manage.

In April 1999, the licensee implemented the eCAP to more effectively manage the CAP. Revisions to the process procedures were accomplished, as previously discussed. All identified issues were to be documented on CRs, which were electronically initiated in the eCAP database. This database then tracked all related information on a real time basis. For example, individuals could use the eCAP to find the current status of a CR, including associated outstanding and completed actions. Because each CR was also assigned an event code, eCAP also allowed for more effective trending of concerns (see section E2.5.b.3). Investigations and corrective actions were required to be approved by an individual's supervisor in eCAP, ensuring a minimum level of management oversight.

Because of the recent implementation, the licensee had not yet completed training all staff on the use of the eCAP. The team observed that workers who had been trained, had a good working knowledge of the system and were using it appropriately. Other workers typically identified concerns to their supervision who then entered them into the eCAP.

c. Conclusions

The team concluded that in general, the procedures and process barriers were adequate to ensure that conditions adverse to quality would be effectively identified, documented, and evaluated. However, there were some instances where the procedural guidance was insufficient or required clarification to describe certain portions of the process. The eCAP was performing it's intended function.

E2.3 Identification of Issues

a. Inspection Scope (40500)

The team reviewed the corrective action process to determine whether conditions considered adverse to quality were being appropriately identified. Areas inspected included plant databases, the industry operating experience program, and plant inspection via plant tours and observation of in progress work activities. The team also interviewed personnel within the operations, maintenance, system engineering, and radiation protection departments to determine the plant staff's perception and understanding of the revised CAP.

b. Observations and Findings

b.1 Plant Identification of Issues

While observing plant activities, the team noted that plant personnel initiated CRs on problems they identified. Discussions with licensee personnel indicated that one of their first actions on finding a problem, would be to initiate a CR, which would be based on the low established threshold. Most personnel interviewed were knowledgeable on the eCAP process and able to demonstrate to the team the use of the eCAP system. The new CR system received positive management support of the program, had a feedback mechanism, and workers were beginning to see positive results from the use of CRs, in part because they could track progress of their CRs through eCAP.

Generally, throughout all levels of the licensee's organization sampled during team interviews, there was a widespread acceptance of the CR system and an understanding when a CR should be initiated. There were some examples, however, noted by the team concerning identification of issues. Similar findings were noted in a recent performance assurance surveillance. In addition, the surveillance indicated that some personnel did not have confidence in the CAP to resolve problems, which could inhibit the initiation of CRs.

The following identification of issue concerns were noted by the team:

Plant Databases

After a review of selected plant databases, the team determined that due to a past, higher threshold for initiating CRs, as well as a practice of closing CRs prior to completion of the corrective action activity, legacy conditions considered adverse to quality were contained within databases other than eCAP. Although all items had been reviewed for restart impact, not all items within the Updated Final Safety Analysis Report (UFSAR) Change, the Job Order System, the Restart Issues, and the Document Procedure Change System (DUCS) databases had been reviewed, to assess whether conditions adverse to quality existed that required an open CR in eCAP. Although the job order system generated corrective actions to remedy conditions adverse to quality, the CR process provided screening features for operability, reportability, and condition investigation; in addition to trending of issues. Licensee staff stated that all conditions adverse to quality were required to be documented in eCAP. The team reviewed three of the four source databases which could contain conditions adverse to quality from past periods.

The team noted that integration of other plant databases within the eCAP process was not yet complete or clearly understood, such that all conditions adverse to quality were recognized, prioritized, and monitored commensurate with their safety significance. The team noted the following issues with the databases:

- UFSAR Change Request Database

There were 200 open legacy UFSAR Change Requests that had not been reviewed, of these, there were potentially 57 items that did not have

programmatic source documents such as a design or procedure change or were not solely for enhancement/clarification purposes. The licensee concurred that the CAP identification process did not appear complete for this database and issued CR 99-2902 to complete this activity.

- DUCS Procedure Change System Database

The DUCS database appeared to have no formal procedure for use, and the team identified conditions adverse to quality entered into the DUCS database that did not have an open CR in eCAP and did not have a 'Hold' on the procedure. Of 2692 items listed within the DUCS database, 2151 items did not have a CR specifically identified for the procedure change. There were 2030 prioritized as 'routine' that should not include conditions adverse to quality. However, based on a sample reviewed, two of these 'routine' coded items were identified with an associated CR indicating a potential condition adverse to quality. In addition, there were 121 items that were potential conditions adverse to quality due to the safety systems involved and/or their 'required for mode' status.

The team selected seven reactor system procedures for further review. Three procedure changes did not have an open CR, although they were identified on CRs that had been previously closed. The procedures were also not placed in a 'Hold' status until the revisions were incorporated. For example, procedure 01/02-OHP-4021.001.004, "Plant Cooldown from Hot Standby to Cold Shutdown," and associated procedure 01/02-OHP-5030.001.001, "Operations Tour," incorrectly stated to position all three containment building sump pumps switches to 'AUTO' rather than the 'STOP' position. As a result, PMP-4100, "Shutdown Risk," Mode 5 requirements for sump level alarms to serve as leak detection devices would not be met. After discussion with the team, the licensee concurred that all items adverse to quality may not have been identified. The licensee issued CR 99-22591 to address the three procedures identified by the team, and issued CR 99-20656 to review all open DUCS items in order to assess whether conditions adverse to quality existed that required an open CR in eCAP.

- Job Order System

The current CAP process implemented in April 1999 required that action requests have an associated CR. However, as recently as July 2, 1999, CRs could be closed to the action request database. The team noted that integration of this database within the current CAP/eCAP process was not clearly understood. Further guidance appeared necessary for the action request database in order to clarify expectations on the legacy backlog maintenance items. The licensee initiated CR 99-22780 to document and address this issue.

Since the licensee had not completed their reviews of these plant databases to ensure that conditions adverse to quality were properly recognized, documented, evaluated, prioritized, and monitored as appropriate with their safety significance, this issue was considered to be an Inspector Follow-up Item (IFI) 50-315/316-99024-01 pending a subsequent NRC review of the licensee's findings. Since all items in these databases

were reviewed for restart impact by the licensee, this IFI will not be considered an NRC restart issue.

#### Plant Inspection

During plant tours, plant personnel appropriately wrote CRs and associated ARs for the issues identified. However, the team noted that some of the issues were readily visible conditions that had existed for a period of time without being previously identified. Examples included: six pieces of equipment secured to safety structures, which was prohibited by posted signs; and duct tape and cardboard 'repairs' covering holes in the rupture diaphragms of the Unit 2 north and south main turbine lube oil tanks. This indicated that there were some areas where long standing problems were being overlooked or not recognized by plant personnel.

#### b.2 Use of Industry Operating Experience

Previous licensee self-assessments had concluded that industry operating experience (OE) was being used ineffectively. Specifically, poor program ownership had resulted in the failure to identify applicable industry events, which resulted in several missed opportunities to prevent similar station occurrences. Subsequently, an OE group was created having overall responsibility for processing industry experience. This new program went into effect on September 1, 1999. The program was defined in procedure PMP 7030.OE.001, "Industry Operating Experience."

The team could not evaluate the overall effectiveness of the OE program given its recent implementation. However, the team observed that the licensee had developed a computer database (Plant Operating Experience database) to collect and track industry events. The team determined that this database was maintained current by selectively verifying that it contained recent, industry event information. As applicable, these events were entered into the eCAP system and periodically discussed at daily station management meetings. For example, CR 99-15392 was initiated to document an industry finding concerning potential adverse effects from the use of Cal-Sil insulation in the emergency core cooling system. The licensee's evaluation identified that this insulation was being used, and that the potential effects had not been evaluated.

#### c. Conclusions

In general, the team concluded that plant personnel were aware of the CAP requirements, were adequately identifying conditions adverse to quality, and understood the low thresholds established for identifying problems. Most personnel interviewed were knowledgeable on the eCAP process and able to demonstrate the use of the eCAP system. The legacy backlogs were not completely reviewed to identify conditions adverse to quality, although the items were appropriately screened as to whether they were necessary for restart.

## E2.4 Documentation and Evaluation of Issues

### a. Inspection Scope (40500)

The team reviewed the process for documenting and evaluating CRs. Specifically, the team focused on how effectively the licensee's staff was at documenting concerns and at determining their significance. This inspection consisted of a review of station procedures, selected CRs and other relevant documents, interviews with cognizant licensee staff, and observations of selected work activities. In addition, the methods used to perform operability determination evaluations were reviewed to verify the adequacy of controls and compliance with regulatory requirements.

### b. Observations and Findings

As stated in section E2.1, the licensee had identified eight specific problem statements from the overall breakdown of the CAP. The first three of these statements, briefly, summarized an overall failure to effectively document and evaluate concerns. Specifically, the licensee determined that personnel were not effectively describing issues in CRs, CR screening and operability reviews were not timely and were largely ineffective, and cause analyses failed to identify and correct the true root causes.

Subsequently, a substantial corrective action process was initiated to address these concerns. In particular, the implementation of the eCAP and the establishment of the various review committees (such as the ESC, SORT, CARB, and Corrective Action Review Committee (CARC)) were designed to streamline the process and assure an appropriate level of management oversight.

These actions appeared to address the overall concern with the identification, documentation and evaluation of issues. The team observed that problem descriptions had improved, screening and operability determinations were more timely and effective, and the quality of cause analyses had improved. Specific details are summarized below.

#### b.1 Documentation and Evaluation of CRs

In general, CRs reviewed that had gone through the licensee's screening process since the inception of eCAP, were classified consistent with the significance of the issue. Although, as stated in section E2.2.b.1, the procedural guidance for assigning action categories was unclear, licensee personnel were appropriately evaluating the concerns. Specifically, reports were properly scoped for restart applicability, the maintenance rule, and operability considerations. Additionally, the licensee typically discussed and reviewed the issues for generic applicability. The ESC assigned the CRs to the appropriate departments and/or personnel for further evaluation and development of corrective actions.

Overall, there were sufficient checks and balances to assure that identified issues were being correctly evaluated. The team noted that the licensee's review committees required additional information for numerous CRs, as the documentation was insufficient for an appropriate evaluation. This was partially due to a lack of guidance in station



procedures and training regarding the minimum information required on a CR. Additionally, this suggested that the first line supervisors may not be performing an effective review of the CRs or lack guidance on the information required. As a result, without further information requests, conditions adverse to quality may not be appropriately resolved due to a lack of information. The licensee was evaluating procedural guidance as discussed in section E.2.2.b.1 of this report.

#### b.2 Operability Determinations

Procedure PMP 7030.0PR.001, "Operability Determinations," adequately described methods for controlling operability determinations. As a result of the large influx of CRs, the licensee established the SORT to perform the initial operability determination for each CR. Subsequent evaluations to provide further analysis of the conditions were usually completed within 24 hours. The team found the initial operability determinations were generally acceptable and contained sufficient detail. It was noted that both units were off loaded and without fuel, such that the majority of plant equipment was not required to be operable at the time of the inspection. However, the team observed that the SORT team were denoting operability determination plant mode restrictions for each of the reviewed CRs.

The team verified proper operability calls were being made by staff, the supporting evaluations reviewed were acceptable, and past operability was generally correctly considered. The SORT group was effective at ensuring the quality of the operability determinations. However, there were no qualification and training guidance for personnel who could perform an operability determination as discussed in section E.2.2.b.1 of this report.

#### b.3 Investigation of Root and Apparent Causes

Root cause evaluations were required for CRs assigned category 1 or 2. An apparent cause evaluation was required for CRs assigned category 3. Category 4 and X CRs did not require cause evaluations based on their lower significance. Procedures PMP 7030.INV.001 and PMP 7030.INV.002 defined the requirements for root and apparent cause evaluations, respectively.

Each evaluation was required to be performed by a qualified (i.e., trained) evaluator. The licensee maintained several qualified individuals in each department to perform these evaluations. The team interviewed several evaluators to verify that the procedural guidance was understood and that the training adequately addressed industry root cause evaluation methods.

Evaluations reviewed by the team were consistent with the procedures and adequately considered, such items as generic applicability, industry experience, and prior station occurrences. The conclusions were generally well-supported and, where developed, the corrective actions were appropriate for the indicated causes.

The evaluations were reviewed by management committees to assure consistency and quality. Specifically, root cause evaluations were reviewed by the CARB and apparent cause evaluations were reviewed by the CARC. Each group assigned the reviewed

evaluations a numerical rating which was tracked by the station as an indicator of the process effectiveness. Root cause evaluations were not considered completed, unless approved by the CARB. However, CARC approval was not necessary for the issuance of apparent cause evaluations. Each department was responsible for assuring that apparent cause evaluations met management expectations. The role of CARC was to serve as an independent evaluator and provide feedback to the individual departments. Although the feedback process appeared to be useful in improving the quality of the apparent cause evaluations, the process was too new to determine the overall effectiveness. The team observed that both committees were conducted in accordance with their respective charters. In particular, the CARB performed a rigorous review of the root cause evaluations and had rejected the majority of the submittals, pending revision. This indicated that the management quality expectations were being enforced.

As of September 17, a backlog of over 400 root cause evaluations existed. In order to reduce this backlog, the licensee began consolidating root causes. This process, which was not proceduralized, consisted of grouping related CRs into an overall root cause report. For example, CR 99-04850 was the consolidated root cause for several CRs associated with Asea Brown Boveri electrical breaker failures. Generally, the consolidated evaluations were consistent with the established guidance. However, the team found some examples where the consolidated report did not reference all the associated CRs. For example, CR 99-09366, regarding breaker failures on the 600 volt electrical bus, was not referenced by CR 99-04850. The licensee had identified other examples and was reviewing the consolidated evaluations for accuracy.

#### b.4 Review of Temporary Processes

The licensee had established sufficient checks and balances to assure that CRs were correctly evaluated for restart. Licensee review committees, such as CARB, CARC, and SORT, were effective at ensuring that management expectations for consistency and quality were being met. However, some of these processes were considered temporary, and the licensee had not developed plans to transition their functions into the line organization. The team was concerned that not incorporating these temporary organizations' functions into the permanent process may not ensure that issues would be properly identified, documented, and evaluated in the future. Licensee management agreed with this concern and was developing succession planning.

#### c. Conclusions

The team concluded that root cause evaluations were consistent with the procedures and adequately considered, such items as generic applicability, OE and prior station occurrences. Conclusions were found to be generally well-supported and, where developed, the corrective actions were appropriate for the indicated causes.

The team also concluded that the operability determination process was effective and that operability determinations and the supporting evaluations were acceptable. This was based on the performance of the temporary SORT. Since the plant was in a shutdown condition and the requirements for equipment was significantly lessened, operability determinations consisted mainly on designating appropriate plant mode restrictions for each of the reviewed CRs.

## E2.5 Corrective Action Program Trending

### a. Inspection Scope (40500)

The team assessed the process in place for trending aspects of the CAP. This included the CAP performance indicators, restart readiness metric for self-identification, and event code trending of plant problems identified on CRs.

### b. Observations and Findings

#### b.1 Corrective Action Program Performance Indicators

The performance indicators measured performance of the CAP, which included timeliness, schedule adherence, quality, and an overall corrective action program index. The indicators monitored the process at both the site and department level. As such, implementation concerns could be tracked to individual groups or departments. The indicators were appropriate measures of how effective or ineffective the program was once a CR was initiated. Recent indicators showed that although some departments have not reached management's expectations, the performance indicator data for the CAP showed some improvement.

#### b.2 Restart Readiness Metric for Self-Identification

Although the restart readiness metric for self-identification provided some indication as to the percentage of issues identified by station personnel versus performance assurance, overall it did not appear to be a useful measure. The metric had a goal of 75 percent of the issues being self-identified. The metric was calculated by the following two methods: (1) percentage of the total number of CRs classified as self-identified and those identified by performance assurance to the total number of CRs classified as self-identified plus those identified by performance assurance and issues identified through external audits; and (2) percentage of the number of CRs classified as self-identified to the total number of CRs classified as self-identified plus those identified by performance assurance and issues identified through any external audits. The metric was highly dependent on the type and number of external and performance assurance audits conducted each month. The licensee was considering altering the metric to provide a more meaningful measure of self-identification that would be performed at the department level.

#### b.3 Condition Report Event Code Trending

The ESC screening process assigned each CR an event code, based on the documented deficiency. The event code was a front end evaluation tool and was not the root or apparent cause code. The Corrective Action Department (CAD) trended CRs by event codes on a monthly basis. The trend report showed 37 broad category charts that used a statistical process deviation to identify plant trends. Since each broad category had several subcategories, the event codes had a finer division for additional analysis.

The CAD identified during the May Event Code Trending Report recent potential adverse trends in procedures, corrective action, training, and assessment. Based on the identification of a potential adverse trend, an adverse trend CR was issued to determine if additional corrective actions were necessary. The CRs for these adverse

trends implemented sufficient short term corrective action to allow CAD to remove these areas from the potential adverse trend list in June based on the latest data that showed a statistical trend improvement. New potential adverse trends in June were in fire protection/prevention, licensing requirements, and maintenance processes. The CAD also identified a lower category for further evaluation called a potential concern, when only 1 out of the 4 weeks showed an increase trend in the month. Presently, CAD generated the reports, although they envisioned each department would develop event code trending using the eCAP data base. The licensee expected value added from event trending when departments pro-actively trended their department CRs weekly. Management anticipated prompt responses to lessons learned to assist in correcting poor methods and practices; and reverse the negative trend.

c. Conclusions

The team concluded that the licensee had established several performance indicators that were adequate to assess the effectiveness of the corrective action program. The team considered the event code process was too new for a complete assessment (since it began with the mid-April implementation of the eCAP system), but determined that appropriate mechanisms were in place for CR event code trending activities and that CAD was identifying potential adverse trends.

**E7 Quality Assurance in Engineering Activities**

**E7.1 Audits and Surveillances (40500)**

a. Inspection Scope

The team reviewed PA oversight actions that evaluated the revised CAP which was implemented as a result of the programmatic breakdown. The review included recent PA audits and a recent PA surveillance, as well as discussions with cognizant licensee personnel.

b. Observations and Findings

The licensee documented PA Audit PA-99-04/NSDRC 264, in a report dated July 1, 1999. The audit concluded that although significant improvements were made in station personnel ability to identify conditions adverse to quality, weaknesses were identified such that the program was not fully effective and ready to support restart of the plant. Weaknesses identified included the following:

- Large backlog of operability determination evaluations and questions,
- Large backlog of root cause evaluations,
- Trending program weaknesses,
- Concerns with operating experience program, and
- Condition Report retrievability weaknesses.

A number of these weaknesses were addressed by this inspection. The licensee was in the process of performing a follow-up audit on the program to address the identified

concerns. In addition, a surveillance was conducted that interviewed a variety of plant personnel to affirm the readiness of the CAP for this NRC inspection. The surveillance concluded that the CAP was sufficient to support plant restart in the area of identification and documentation of conditions adverse to quality. The audit did identify some examples where personnel did not recognize the threshold for identification of conditions to quality, similar to those identified by this inspection. In addition, more than 50 percent of the personnel interviewed expressed a lack of confidence or ability of the CAP to correct identified deficiencies. This observation was not surprising to the licensee based on the large backlog and influx of open CRs, while resolution and close of issues has progressed slowly. The licensee's ability to resolve CRs will be addressed in a subsequent NRC inspection.

Several PA audits reviewed identified concerns with inadequate documentation of corrective actions on CRs and inadequate resolution of CRs, including previous PA findings. Procedure PDP-7022.001, "Performance Assurance Corrective Action Follow-up and Escalation," was initiated to ensure that PA would follow-up on previous identified items and ensure they were adequately resolved. As previously stated, the licensee was in the process of strengthen the process for the resolution of CRs, which will be subject of a subsequent NRC inspection.

c. Conclusions

The team concluded that PA audits and surveillances were performed by qualified personnel. The results of the audits and surveillances were in-depth and identified a number of significant findings with respect to the corrective action program.

## **V. Management Meetings**

### **X1 Exit Meeting Summary**

The team presented the inspection results to members of licensee management at an exit meeting on October 1, 1999. The licensee acknowledged the findings presented. The team asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

## **PARTIAL LIST OF PERSONS CONTACTED**

### Licensee

G. Ault, Design and Plant Engineering Condition Report Team Manager  
C. Bakken, Site Vice President  
P. Barrett, Performance Assurance  
S. Blosser, Self Assessment Program Coordinator  
R. Crane, Regulatory Affairs  
T. Craven, Performance Assurance  
M. Danford, Corrective Action Department Manager  
M. Dryden, Corrective Action Department  
M. Finissi, Director of Plant Engineering  
P. Ganey, Corrective Action Department Supervisor  
R. Gaston, Compliance Manager  
R. Godley, Director Regulatory Affairs  
S. Greenlee, Director Design Engineering  
B. Kalinowski, Performance Assurance  
J. Long, General Supervisor Environmental Protection  
M. Marano, Director Business Services  
J. Molden, Director Maintenance  
J. Nadeau, Corrective Action Department Performance Analyst  
T. Noonan, Plant Manager  
G. Northcutt, Assistant Operations Department Manager  
J. Pollack, Director of Performance Assurance  
R. Powers, Senior Vice President  
M. Rencheck, Vice President of Engineering  
E. Riddell, Operating Experience Coordinator  
C. Schlimpert, Corrective Action Department Project Manager  
A. Silakoski, Corrective Action Department  
M. Stark, Maintenance Supervisor  
T. Taylor, Licensing  
C. Vanderniet, Performance Assurance  
D. Walton, Corrective Action Department Root Cause Analyst  
S. Ward, Nuclear Specialist–ESC and CARC Chairman

## **LIST OF INSPECTION PROCEDURES (IP) USED**

IP 40500: Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems  
IP 92903: Followup - Engineering

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

IFI 50-315/315-99024-01	IFI	Screening of Issues in plant databases for inclusion in eCAP not complete.
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### Closed

None

### Discussed

None

## LIST OF ACRONYMS

CAD	Corrective Action Department
CAP	Corrective Action Program
CARB	Corrective Action Review Board
CARC	Corrective Action Review Committee
CFR	Code of Federal Regulations
CR	Condition Report
DRS	Division of Reactor Safety
DUCS	Document Procedure Change System
eCAP	Electronic Corrective Action Program
ESC	Event Screening Committee
IFI	Inspection Follow-up Item
IP	Inspection Procedure
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PORC	Plant Operations Review Committee
PA	Performance Assurance
SORT	Shift Operability Review Team
UFSAR	Updated Final Safety Analysis Report
°F	Degrees Fahrenheit

## LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion on this list does not imply that NRC team reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document in this list does not imply NRC acceptance of the document, unless specifically stated in the inspection report.

### Procedures

PDP 7022.001	Performance Assurance Corrective Action Follow-up and Escalation, Revision 0, 7/16/99
PMI 7030,	Corrective Action Program, Revision 27, 5/3/99
PMP 7030.CAP.001	Corrective Action Program (CAP) Process Flow, Revision 2, 7/2/99
PMP 7030.INV.001	Rood Cause Investigation and Approvals, Revision 4, 4/15/99
PMP 7030.INV.002	Apparent Cause Evaluation and Condition Resolution, Revision 3, 4/15/99
PMP 7030.OPER.001	Operability Determinations, Revision 2, 5/11/99
PMI-7034	Self Assessment Program, Revision 0a, 6/16/99
PMP 7034.SAP.001	Conduct of Non Regulatory Self Assessments, Revision 1, 6/16/99
PMP 7200.RST.004	Expanded System Readiness Review Program, Revision 8
PMP 7200.RST.009	Programmatic Restart Readiness, Revision 0a, 4/8/99
PMP 7200.RST.010	Functional Area Restart Readiness, Revision 1a, 5/28/99
01-OHP-4021.001.004	Unit 1 Plant Cooldown from Hot Standby to Cold Shutdown
02-OHP-4021.001.004	Unit 2 Plant Cooldown from Hot Standby to Cold Shutdown
01-OHP-5030.001.001	Unit 1 Auxiliary Building Tour, Revisions 14 and 15
02-OHP-5030.001.001	Unit 2 Turbine Building Tour, Revisions 13 and 14

### Control Room Log Reports

Unit 1 Control Room Log Reports Day Shift A; July 15, 1999 - July 18, 1999

Unit 2 Control Room Log Reports Night Shift B; August 9, 1999 - August 11, 1999

### Audits and Self-Assessments

PA Audit 98-29/NSDRC#261	Corrective Action Program - Actions Taken to Correct Deficiencies PMI-7030, 2/2/99
PA Audit 99-03/NSDRC#263	Personnel Selection, Indoctrination, Training and Certification & Organization, 8/23/99
PA Audit 99-04/NSDRC#264	Corrective Action Program - Actions Taken to Correct Deficiencies, 6/30/99
MNCA-98-04	Corrective Action Program Assessment, 1/99
RST-1999-001-CAP	Functional Area Assessment Report of Corrective Action Department, 8/23/99
RST-1999-001-CAP	Programmatic Assessment Report of Corrective Action and Self Assessment, 8/24/99
RST-1999-007-OPS	Programmatic Restart Readiness Operations Self Assessment, 8/27/99
SURV 99-044	Affirmation of Readiness for Inspection - NRC 0350 Case Specific Checklist Item 2(a) - Corrective Action Identification, 9/17/99



### **Performance Assurance Field Observations**

FO-99-I-174 Plant's response to NRC non-cited violations  
FO-99-H-189 CAP status regarding restart related condition evaluations  
FO-99-B-054 Root Cause Training  
FO-99-D-116 CARB Charter  
FO-99-C-003 Management Review Board Meetings 3/15/99-3/29/99  
FO-99-D-008 Operating Experience not assigned to Expanded System Readiness Review systems

### **Root Cause Evaluations**

97-3360 Programmatic breakdown of the CAP  
99-00353 Untimely resolution of HFA relay issue  
99-00594 Programmatic breakdown of the Design Control Process  
99-04130 Lack of vendor recontact with NSSS supplier  
99-07213 Coolant charging pump surveillance test procedure inadequacy  
99-12029 Training department records

### **Corrective Action Review Board (CARB) Meeting Minutes**

CARB#10, 6/30/99  
CARB#11, 7/14/99  
CARB#12, 8/21/99  
CARB#13, 8/28/99  
CARB#14, 8/4/99  
CARB#15, 8/11/99  
CARB#19, 9/8/99  
CARB#20, 9/15/99

### **Trend Reports**

Corrective Action Program Monthly Performance Indicators July 1999  
CAP Event Code Trend Report, May 1999  
CAP Event Code Trend Report, June 1999

### **Miscellaneous Documents**

Restart Action Plan 0002, "Corrective Action Program Restart Readiness," Revision 0B, 9/21/99  
AEP:NRC:1260GH, "Reply to Notice of Violation dated October 13, 1998," 3/19/99  
Corrective Action Program Leadership Plan, Revision 2, 8/31/99  
CARB Charter, Revision 2  
Root Cause Consolidation Guide (undated)  
GP-0-9901, Revision 2, Lesson Plan for Root cause evaluation training  
Course Attendance History for Apparent Cause Evaluator training through 8/31/99  
Regulatory Affairs Leadership Plan, Revision 3u  
INPO 97-011, "Guidelines for the Use of Operating Experience," 12/97  
Job Package 2-NFP-220-V2, "Clean Boric Acid and Adjust Packing on Reactor Coolant Loop No. 2 Motor Operator Valve," 9/3/99  
Post Job summary sheet for Job Package No. 2-NFP-220-V2, 9/3/99

## **Condition Reports**

97-3360	Quality assurance audit identification that CAP is ineffective
P-99-02168	Craft workers did not identify unacceptable condition during their inspection
P-98-03291	Inadequate UFSAR update process
P-99-04130	NRC apparent violation of Appendix B, Criterion II related to vendor recontact program
P-99-04850	Metal Clad Switchgear breakers have demonstrated some adverse trends
P-99-07453	Inadequate ESC categorization and specification for CR 99-4369
P-99-08065	Inadequate ESC training
P-99-08345	CR 99-6607 was assigned as a condition adverse to quality when it should have been assigned as a significant condition adverse to quality
P-99-08503	Foot detector on gamma 40 monitors at North Guard Shack was out of place
P-99-08620	Electrical Fault on Motor Control Center 2-AM-B
P-99-08824	Inadequate inservice test acceptance criteria for component cooling water pump discharge check valves
P-99-08889	Potential unreviewed safety question - Essential service water strainer backwash system
P-99-08964	Removal of motor brakes from motor-operated valves
P-99-08972	Model number on differential pressure transmitter different than equipment qualification (EQ) model
P-99-09366	600V Switchgear circuit breakers have demonstrated adverse trends
P-99-09409	Unit 2 'AB' diesel failed to attain speed of 514 RPM within 10 seconds
P-99-09492	The diesel generator jacket water cooler inlet temperature has been below the preferred range on nine tests run since June 1998
P-99-09563	Fire dampers in motor-driven auxiliary feedwater pump room may not close under high energy line break
P-99-09715	Reluctance among Operation's staff to raise issues to management
P-99-09720	Potential chilling effect in Operation's department
P-99-09861	The maintenance rule database is no longer functioning on the engineering S:\drive
P-99-10374	Three operability determinations misinterpreted the ABB technical manual
P-99-10640	Technical Specification exception differs from the loss-of-coolant-accident analysis assumption
P-99-10675	Safety-related equipment in steam generator enclosure not evaluated for EQ
P-99-10689	Operability determination evaluation being performed for category 1 and 2 CRs contrary to procedure
P-99-10732	Inadequate thread engagement
P-99-10898	Open effectiveness reviews from CARB approved condition reports
P-99-10884	Not all safety-related 600V molded case circuit breakers are over-current tested to prove operational availability
P-99-11212	SORT comments overwritten when CR 99-10760 was rewritten
P-99-11217	Improper oil level in component cooling water pump bearings
P-99-11434	Inadequate basis for frequency decay rate used for reactor protection system trip setpoint determination for reactor coolant pump bus underfrequency
P-99-11989	120 Volt vital distribution system in a degraded condition
P-99-12029	Methodology to document and verify training and qualification is inadequate
P-99-12079	Breaker 1-11D10, missing lock and spider washers

### **Condition Reports (continued)**

P-99-12486 Industry Operating Experience OE 9935, "MOV Failure to Operate at Turkey Point"  
P-99-12927 Environmental qualification of Victoreen high range radiation monitors may not be adequate  
P-99-12969 Radiation Protection Programmatic Issues  
P-99-13076 Essential service water strainers experiencing numerous failures  
P-99-13693 Failure to determine the cause and take corrective actions to preclude repetition for significant conditions adverse to quality as described in CR 99-07213  
P-99-13697 The preventive maintenance program has been ineffectively implemented  
P-99-14567 Gasket containing asbestos was removed by non-qualified personnel  
P-99-15072 4kV degraded voltage Technical Specification lower allowable limit is not adequate to protect connected safety-related motors  
P-99-15201 Did not considered the effects of Cal-SII insulation as a threat to the recirculation pump  
P-99-15262 Drop out settings for degraded voltage relays may not be conservatively set  
P-99-15392 Industry Operating Experience OE 9997, "Effect of Cal-SII Insulation not addressed in design of ECCS strainer"  
P-99-15796 NRC commitments in the Notice of Violation dated 10/13/98 were not adequately identified in the Commitment Management System  
P-99-15970 Generic CR for investigating potential safety conscious work environment issues  
P-99-16216 CR 989-4653 declares valves inoperable but no operability determination form could be found  
P-99-16822 The engineering implementation of a preventive maintenance program has been ineffective resulting in potentially unreliable systems or components  
P-99-16853 Surveillance test did not meet Technical Specification channel function test requirement  
P-99-17286 Potential adverse trend involving equipment clearances  
P-99-17554 Potential operability concern on north-east service water  
P-99-18278 Breakdown in the CAP within the Performance Assurance Department  
P-99-18290 Condition reports incorrectly closed  
P-99-18297 Condition reports incorrectly closed  
P-99-18298 Condition report 99-08553 was incorrectly closed to an unrelated condition report  
P-99-18302 Condition reports were incorrectly closed to unrelated condition reports  
P-99-18559 Possible disconnect between station vendor procedure approval process and Quality Assurance Program Department  
P-99-18880 Certain emergency diesel generator functional requirements are not met and other functional requirements are uncertain  
P-99-19037 CRs were closed out to other reports without adequate cross-referencing  
P-99-19455 Adverse trend in closure of condition reports  
P-99-20042 Discrepancies noted during preventive maintenance on 2-CMO-102  
P-99-20129 Tripped Unit 2 'CD' diesel generator due to load swings  
P-99-20333 The event trend report apparent cause investigation identified an adverse trend in the procedures area  
P-99-20340 Shift supervisor not notified when a potential operability issue was identified  
P-99-20591 27% of category 3 CRs were rejected by Corrective Action Department  
P-99-20667 Measured lake temperature for July 24 through 26, 1999, indicate that the design basis value of the ultimate heat sink temperature of 76°F was exceeded

### **Condition Reports (continued)**

P-99-20723 2AB battery room fan removed from service without complete impact review  
P-99-20870 Undervoltage alarm on the 'N' train battery  
P-99-21030 A temporary modification was installed on the Unit 2 'AB' battery room door/ventilation without a temporary modification evaluation and authorization  
P-99-21163 Concerns with 4kV breaker refurbishment procedure 12IHP5021.EMP.024  
P-99-21430 Non-Cited Violation from NRC Report No. 50-315/316-99015  
P-99-21510 Potential NRC violation for failure to implement effective corrective actions  
P-99-21171 Motor-operated valves VOTES test data review  
P-99-21567 Damage to containment fan shaft bearing and housing  
P-99-21624 Valve 2-NSW-352S installed incorrectly  
P-99-21896 Root cause report for the 600 Volt breaker failures was approved by the CARB under a previously approved root cause report number  
P-99-21967 Supervisor can delete or change CR description without initiator approval  
P-99-22031 CR taking longer than 1 day to be reviewed by NED supervisor  
P-99-22167 Packing gland nuts found bottomed out on gland bolts on valve 2-NFP-220-V2  
P-99-22405 While performing an inspection in 2-TPP-V a bolted bus bar connection lacked full thread engagement  
P-99-22414 While performing an inspection in 2-TPP-V the conduit that feeder cable 3418R-2 runs thru has no fireseal installed  
P-99-22416 While performing an inspection in 2-TPP-V the tagging device was oversized for the fuse clip that it was installed in  
P-99-22418 While performing an inspection in 2-TPP-V a screw is missing from the top terminal block of cubicle 2-TPP-V-2C  
P-99-22421 While performing an inspection in 2-TPP-V two screws are missing from the top terminal block of cubicle 2-TPP-V-2E  
P-99-22520 Wiring print shows different connection than found in field for BK lead on cable 3868-2  
P-99-22597 U2 Main Turbine Lube Oil Tank - holes in north and south rupture diaphragms  
P-99-22681 NRC comments on Corrective Action Program  
P-99-22780 Potential bypass of the CAP created by the work control process